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ABSTRACT

This chapter concentrates on policies that increase the efficiency of schools rather than just more spending. The first focus is on the causes of educational inefficiency. These include lack of standards and accountability, centralization, unaccountable management and labor, federally induced inefficiency, and nonmarket inefficiency. Steps policymakers can take to increase productivity are: (1) focus schools on learning; (2) apply principles of effective instruction; (3) increase the amount of instruction; (4) ensure quality instruction; (5) improve the organization of work and instruction; (6) employ uniform standards; (7) allow for student differences; (8) work to overcome "Matthew effects" of increasing ability differences; (9) group students in appropriate ways; (10) develop external examinations; (11) hold educators accountable; (12) incorporate appropriate incentives; and (13) abolish or voucherize federal education programs. Particular attention is given to the role of privatization, which might better satisfy educational requirements for all but the special interests of public school providers and defenders of the status quo. The evidence for the superior achievement of private schools suggests enlarging their numbers with publicly subsidized vouchers. (Contains three figures.) (SLD)

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ED 419 074

Laboratory for Student Success

Uncompetitive American Schools: Causes and Cures

by
Herbert J. Walberg
University of Chicago

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Uncompetitive American Schools: Causes and Cures

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By the standards of what educated citizens should know, our students perform poorly on examinations in civics, geography, history, and other subjects.[1] Compared to students in other countries, older American students do poorly in mathematics, science, and foreign languages.[2] Yet American students are not behind in the early years of schooling: Their achievement, relative to students in other countries, falls behind when learning is the chief responsibility of schools. Indeed, as documented below, in terms of "value added" gains in reading, mathematics, and science during the school years, American students do worst among those in affluent countries.

Coming in last in learning gains is attributable to the organization and operation of schools rather than what is spent on them or the quality of entering students. As discussed below, family conditions for learning have improved substantially in recent decades: Family income has risen, for example, and the number of children per family has declined both of which are associated with higher ability.[3] Indeed, intelligence test scores—a measure of the education industry's quality of raw material—have risen steadily for several decades.

For a half-century, moreover, per-student costs, adjusted for inflation, have also risen substantially. Eric Hanushek concludes that "educational productivity is falling at 3 1/2 percent per year relative to low productivity [service] sectors of the economy" (pp. 10-11).[4] Adjusted for purchasing power, moreover, U.S. school costs have recently been highest among the countries surveyed by the Organization for Economic Cooperation and Development. Special reasons may account for such high costs, but additional spending makes little difference, and it appears unlikely that large funding increases will continue.[5]

It may be argued that U.S. schools cost more because they have taken on more responsibilities than those of other countries and have therefore de-emphasized academics.

However, many elected political leaders, business people, citizens, and parents insist that learning should be the schools' core mission. Congress and state legislatures have called for better progress and passed laws to monitor achievement progress. It may also be argued that our complex system of federal, national, state, and local control increases costs, as do large-scale federal programs for poor and handicapped children. If these choices, however, are not accomplishing their purposes, they should be open for the kinds of questions raised below.

For these reasons, this chapter concentrates on policies that increase efficiency rather than yet more spending: The first four are common sense and supported by much research: focus schools on their core mission—learning; apply principles of effective instruction; employ uniform curriculum standards; and allow for student differences. Common sense and much research over the past four decades show the efficacy of these steps. After the last decade of heroic reports and efforts, however, these steps are still not in place. Therefore, three additional steps are necessary and discussed in the concluding sections of this paper—deregulation, incentives, and privatization.

THE SCHOOL CALAMITY

By themselves, poor international rankings are flawed indicators of school effectiveness since learning is a lifelong process begun in infancy. By the time students begin first grade, their high school achievement is partly determined. For this reason, indices of educational effectiveness require analysis of the distinctive value that schools add to learning.

The OECD recently took this step by comparing country differences in reading literacy of 9- and 14-year-olds.[7] Reading is arguably the best single indicator of language skills and predictor of achievement in school subjects. Mainly through reading, students acquire information and ideas in academic subject matter. Even solving mathematics and science problems depends on reading skills.

Value Added Gains during the School Years

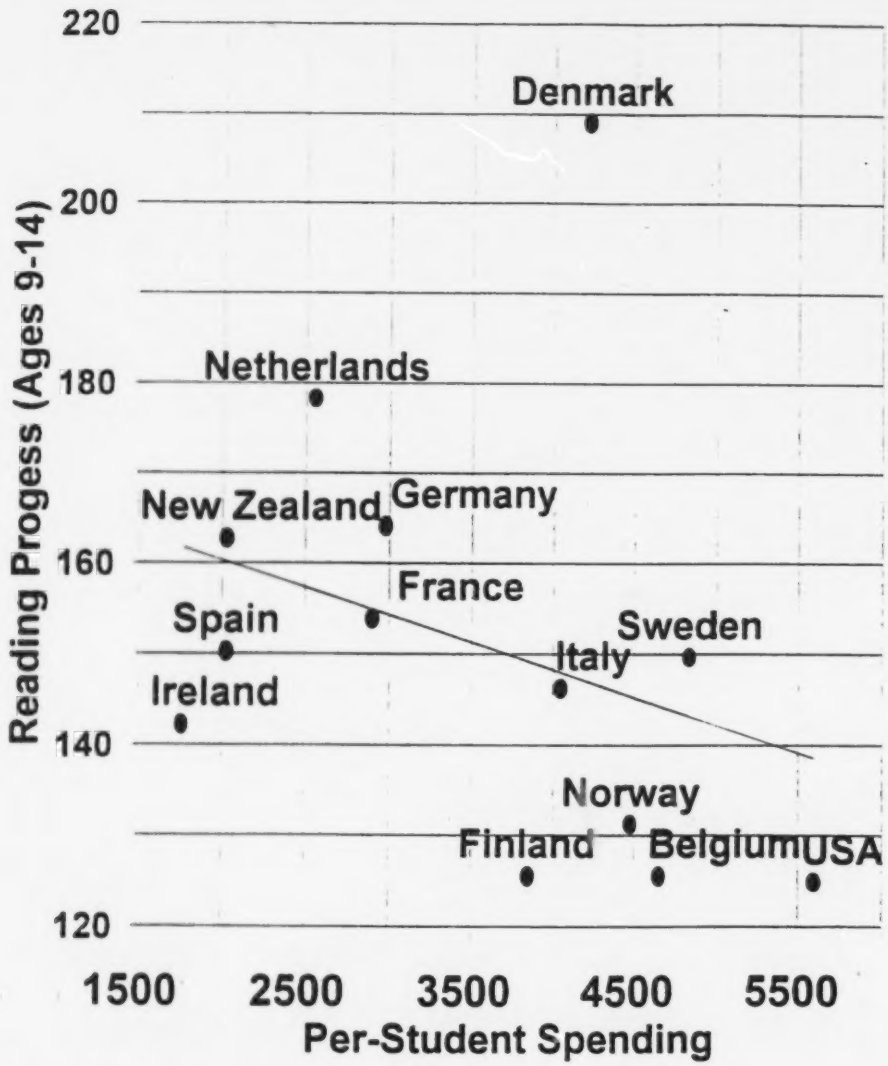
U.S. 9-year-olds ranked well. They should since they were much better prepared when they entered school than previous generations. Intelligence test renorming surveys for the last half-century show that American children's language mastery at the time of school entry has steadily and substantially increased.[8] Several social conditions apparently account for increases in children's preschool verbal and other academic skills, namely, preschool and child care programs that teach many children the alphabet and other language skills, increasing family income and years of education associated with children's language mastery, and increased children's exposure to verbal mass media.

Just as social and familial reading encouragement varies across time, so too does it vary across countries. Countries vary widely in the possible determinants of early childhood reading skills, for example, preschool and child care policies, family practices in child rearing (including alphabet teaching), degrees of bilingualism in families and society, age of starting school, family income and wealth, and cultural cohesion. Since countries vary in these respects, the OECD devised the index of progress during school years.

The reading literacy progress index is the (cross-sectional) difference in country scores for the two age groups, 9 and 14. It is a well-suited index of school progress in several respects. By age 9, all normal children in OECD countries have started primary school; by age 14, almost none has dropped out of secondary school. Measuring differences between them adjusts away prior differences in reading readiness, socioeconomic status, and other conditions as much as the state of the art of international research on education policy allows.

By this international standard of reading progress, how did American schools do? Of the 16 OECD countries surveyed, they were in last place. As shown in Figure 1, they also spent the

Figure 1
Reading Progess and Spending



most money per student served—clearly making them least efficient with the least gains and highest costs.

In 1996, the OECD published analogous value-added gains in science and mathematics for students in the seventh and eighth years of schooling.[v] Figure 2 shows data on the 24 participating OECD countries (and candidates Korea and the Russian Federation). U.S. schools again yielded the least gains in both subjects.

CAUSES OF INEFFICIENCY

Research on improving learning shows that common-sense principles work well. For example, you tend to learn what you are taught, and the more you study and the bigger your incentives, the more you learn. Educators and policy makers, however, have often ignored such research. Other problems appear to handicap our students.

Lack of Standards and Accountability

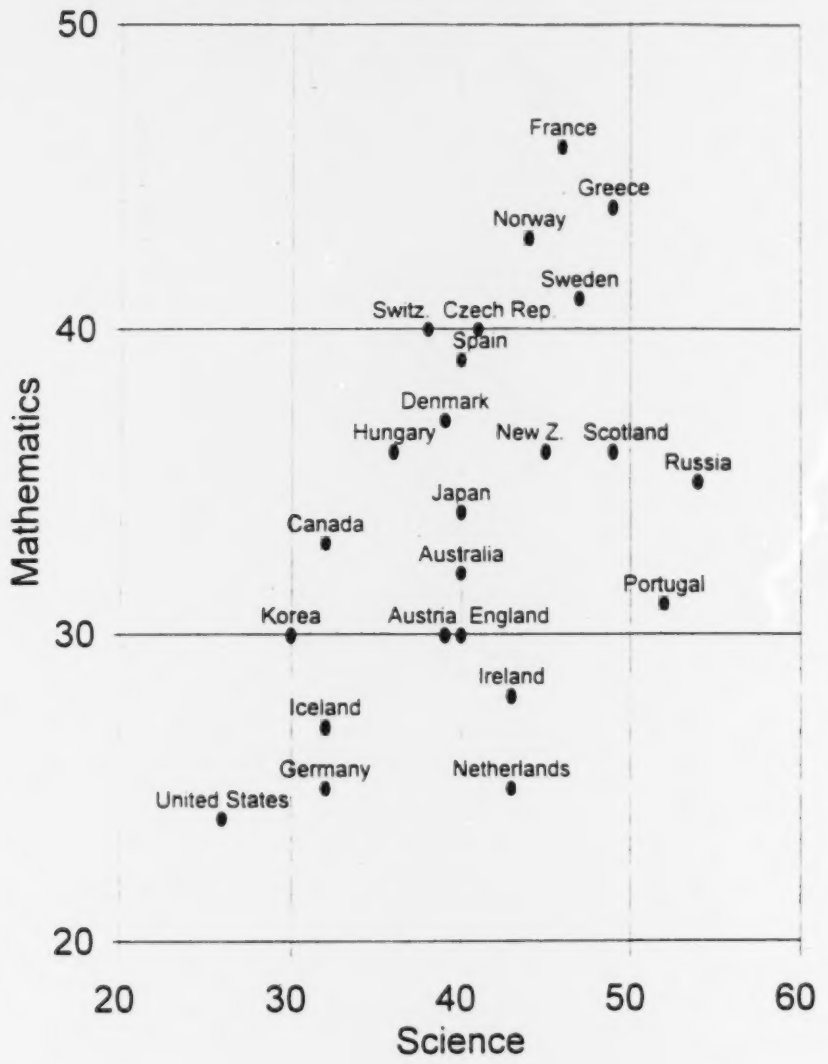
Like Australia, Germany, and Canada, the U.S. system has no education ministry, well-defined national goals, curriculum, or testing system. States are constitutionally responsible for providing a system of free schools but leave much discretion to local boards. What is taught in classrooms, in turn, is highly variable even within the same schools. Therefore, aside from vague notions, a teacher in any grade cannot depend on what the teacher in the previous grade has taught. The lack of coordination across grades and subjects is especially harmful to children who move, particularly if they are also poor.

Lack of standards means that state and local boards can hardly assess progress made by districts, schools, and teachers. To the extent that curriculum and goals vary, it is difficult to compare schools, which makes accountability for results nearly impossible.

School boards frequently split into factions, and few members have extensive board, business, or education experience. Often serving limited terms, they seem more interested in

Figure 2

Seventh to Eighth Grade Learning Gains



personnel and ideological issues than whether the schools are achieving results. Assessing learning progress, moreover, requires some mastery of educational productivity research, psychometrics, and statistics just as assessing business progress requires accounting and other skills.

Since few educational leaders have mastered such skills, they are often taken in by such fads as "whole language," "authentic tests," and "site-based management" the success of which is undemonstrated in randomized experiments or statistically controlled research. School board members tend to follow what they can that interests them—often personnel, inputs, and processes rather than results. Usually unpaid, their stewardship is often of corresponding value. Similarly, administrators are paid—not for results—but according to their advocacy of faddish ideology and the number of their subordinates. Confusion and bureaucracy correspondingly grow.

Centralization

Despite the lack of uniform standards and accountability, the governance and funding of public schools have become more centralized in the last half century leading to other kinds of inefficiency. States increasingly centralized education finance and control. They paid increasingly larger shares of school costs, but the higher the state share, the worse the state's achievement despite vast increases in inflation-adjusted per-student spending.[10] Higher state shares make school boards and administrators less accountable to local citizens since they need not justify expenditures as carefully.

Larger state shares also entail increased regulation, reporting, bureaucracy, and distraction from learning. Much energy goes into the question of who governs—the federal government, the state, the local district, the school, or teacher. It is nearly impossible to affix responsibility for results.

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Schools and school districts, moreover, have increasingly consolidated into larger units that achieve less. Average school enrollments multiplied by a factor of five although large schools tend to be more bureaucratic, impersonal, and less humane. Large middle and junior high schools tend to departmentalize and employ specialized teachers and ancillary staff who confine themselves to their specialties rather than imparting a broad view of knowledge. The teachers in large, departmentalized schools tend to know their students much less well than teachers who have the same students for most subjects for nearly the whole day.[11]

About a half century ago, there were 115,000 U.S. school districts; now there are about 15,000, the largest of which tend to be least effective. The reasons for their inefficiency are best seen in New York and other large cities with up to 900 schools. In such huge districts, school board members can hardly name the schools let alone and hold them accountable.

On the other hand, small adjacent public school districts and private schools within districts give rise to incentives that cause all schools to compete and raise their productivity.[12] Choice plans that allow students to cross school and district boundaries also increase productivity. As Caroline Hoxby found,

> Areas with greater opportunities for choice among public schools have lower per-pupil spending, larger class sizes, and lower teacher salaries. The same areas have better student performance, as measured by students' educational attainment, [starting] wages, and test scores.[13]

In an analysis of the Massachusetts interdistrict public school choice plan, David Armor found an underlying reason for such productivity improvements: Schools and districts that lost students improved their policies and programs to win them back.[14] With choice and competition, markets apparently work in education as they do in other industries: They lead entrepreneurs to innovate, cut costs, and improve results for citizen consumers.

Unaccountable Management and Labor

Public schools are government subsidized quasi monopolies. They are unchallenged by entrepreneurial leadership and the incentives, efficiency, and consumer appeal provided by market competition. With legislators and school boards often under their thumbs, teachers' unions and administrators can exploit forced-choice customers in service of their interests in minimizing workload and maximizing pay and perquisites.

Teachers' unions—few call them professional associations—have actually done splendidly for their members. In college, education majors have typically scored worst or near worst on ability tests among undergraduate majors. Yet, as teachers, they have a 180-day school year—the shortest among teachers in industrialized countries (and much less than the 235 days most salaried U.S. professionals normally work). In large cities and elsewhere, many teachers are in school only about six hours according to contract. Some grade papers in the evening, but many professionals work at home. In addition, teachers have little accountability, nearly inviolable tenure, and early and generous pensions that increasingly threaten city and state budgets.[5]

Teachers, of course, are acting rationally in their own interest, as are their unions, in maximizing their benefits while reducing their efforts. It is school boards and state legislators that have been remiss in failing to provide effective management, informed stewardship, and accountability to citizens who pay the bills.

Teachers' unions have done better for themselves than for their members. During the last half-century when membership in private-sector unions declined, teachers' unions increased their membership. They contracted for expensive smaller classes, which do little for learning. With fixed budgets, smaller classes actually mean lower salaries since costs must be spread among more teachers. Smaller classes, of course, increase the number of teachers and, indirectly, union members, central coffers, and legislative influence.

In bargaining, school boards have hardly been a match for nationally organized unions that can bring to bear strong, narrow self-interests, statistical research, and specialized expertise to negotiations. Yet, according to Harvard and Chicago economists Caroline Hoxby and Samuel Peltzman, teachers' union success was associated with worse results for students. Statistically controlled surveys showed that the sharp rise in teacher union membership and militancy for the period 1971-91 not only increased per-student costs dramatically but also increased dropout rates and adversely affected test scores in 48 states surveyed.[16] As teacher unions grew in membership, income, and power, they gained greater influence over state legislatures, which in turn increasingly usurped local control and left the schools increasingly unaccountable to local taxpayers.

Federally-Induced Inefficiency

Federal officials further usurped local autonomy and reduced efficiency in directing the annual spending of $175 billion in program dollars for "categorical" and "compensatory" programs to remedy various social and individual ills.[17] In theory, these funds went to small, special classes and services for children categorized as poor, migrant, bilingual, racially segregated and psychologically impeded. In practice, the federal legislation created special producer interests and huge bureaucracies at the federal, state, and local levels.

These programs had little foundation in research, and subsequent studies showed they were ineffective and, in some cases, harmful. Such stigmatic epithets as "mildly mentally retarded" and "learning disabled" lowered teachers', parents', peers', children's own expectations for what they can learn. Despite increased costs and administrative complications of categorical programs, evaluations over the last several decades showed that such students are often spuriously categorized. Even those appropriately categorized often learn more in regular than

segregated special classes. Yet, spending on such programs increased inexorably; it brought billions of dollars into congressional districts.

Such federal and state categorical programs resulted in increasingly poor productivity (ratios of achievement results to inflation-adjusted per-student costs). Also contributing to poor productivity are complex, conflicting, and often-changing federal and state regulations. They cause educators to serve many masters in central offices, State Houses, and Washington and to neglect their central purpose—the learning of all children. Along with the natural and self-interested proclivities for bureaucracies to expand, such regulations cause the U.S. to have the highest percentages of costs for nonteaching staff among OECD countries.[18]

Non-Market Inefficiency

American schools have largely become a quasi-monopolistic, heavily regulated, status quo system favoring publicly subsidized, inefficient providers. Unlike leaders of private firms, school board members and administrators are unguided by consumer purchases of their services. Only the rich or those who sacrifice substantial income have recourse to private and the best suburban schools. Generally, those who live in cities, the poor, and minorities and who most need better schools can least afford them. Their schools most need innovation, efficiency, and customer appeal; yet they are handicapped by special interests, federal regulation, and subsidies for failed programs.

To increase effectiveness and efficiency, public schools require competition, as do other industries. From a consumer view, for example, Mazdas, Mercedes, and Saabs have improved products of General Motors, Ford, and Chrysler. International competition increases quality, innovation, diversity, and consumer satisfaction while reducing costs.

Similarly, international markets challenge whole countries. The policies they adopt, the efficiency of public services, and the preponderance of private sectors determine the quality of

life. Countries that insulate government and private domestic providers from competition deny citizens superior services and goods at lower costs that markets provide.[19] Countries that heavily subsidize public providers and arbitrarily or corruptly regulate private providers fence out investment and innovation. They harm themselves with unemployment and poor economic growth. They hurt other countries by refraining from free international commerce that raises world prosperity. Compare China with Hong Kong and Taiwan, North with South Korea, or Eastern with Western Europe. Free market forces increasingly challenge countries that heavily subsidize and regulate providers, and, in my view, it is time for schools to compete—a point further discussed below.

STEPS TO INCREASE PRODUCTIVITY

Given that they face the affluent countries' least effective schools, what can U.S. policy makers do? Extensive research and common sense reveal the efficacy of seven reforms discussed in this section. The refractory forces of convention and special interests may insure that such reforms may not be enacted intensively and extensively. For this reason, a concluding section assesses a radical and controversial reform—privatizing schools to make them more responsive to national needs and consumer preferences.

Focus Schools on Learning

As school and districts rose in enrollments in the last half-century, they took on ever more specialized, often non-academic tasks.[20] School boards responded to state mandates and other external pressures to add specialized administrators and separate programs for health, psychological, and other services. These services were added as legislatures, special interests, regulatory agencies, and professional associations built consensus among themselves. They brought pressure to bear on state departments of education and school districts to provide specialized and peripheral programs such as driver education.

Yet, if schools are not carrying out their core mission, how can they be expected to assume additional responsibilities? This is an especially important question today when "full service" or "collaborative service" schools are proposed that would assume responsibility for family functions and coordinate health, social work, recreational and other community professionals. The usual answer is that when problems are severe, everyone is responsible. It may be replied, however, that when seven agencies are nominally responsible, no one is responsible, and any agency that claims 13 goals has none.

Federal initiatives, moreover, further divide the schools' mission and multiply administrative complexities, especially in large urban districts where they are most prevalent.[2] Funding for special education, bilingual, migrant, and vocational programs, for example, promotes special interests but excludes educational generalists, other specialists, and lay citizens. Private schools and smaller districts and schools often skip such programs thereby maintaining a cohesive core curriculum of solid academic subjects taken by most students and associated with higher achievement.

Besides districts, schools have become larger. Although their bureaucratic growth may have been well intentioned, it had harmful psychological consequences. A good example is subject matter specialization in elementary schools. In many communities, the last few years of the traditional eight-year elementary school have been replaced by departmentalized middle and junior high schools. In such schools, students may now have five or so specialized teachers, none of whom knows them as well as teachers who have the same class most of the day. Like hospitals that treat diseases rather than patients, such schools are likely to teach subjects rather than students.

Smaller districts and schools, moreover, can adapt to local preferences and conditions, and strengthen ties among teachers and parents that induce learning. They are likely to do fewer

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things better and avoid spurious categorization of students, ineffective programs that ill-serve them, and inefficient administrative complexity.

In any case, making learning the school's primary mission seems essential. Big city districts are most handicapped by the complications of serving many masters since greater fractions of their operating funds come from federal and state categorical programs. Even when their costs are reimbursed, such programs are not only often ineffective but often cause administrative nightmares. Thus, federal and state laws have most damaged the schools that face students with the greatest needs.

Apply Principles of Effective Instruction

During the last half-century, scholars have published hundreds of randomized experimental studies of effective instruction in dozens of journals. During the past five years, much of this was condensed to eight handbooks of research on instruction in science, mathematics and the other school subjects, some of them running to 900 double-columned pages by dozens of chapter authors. In a project sponsored by 28 influential professional education organizations with more than two-million members, Gordon Cawelti invited the editors of these works (and me on generic principles) to describe in a page or two each of ten most effective teaching strategies.[22] This and other synthetic works cannot easily be summarized, but a few pervasive principles can serve as illustrations.[23]

Amount of Instruction

The 1983 report of the National Commission on Excellence in Education *A Nation at Risk*[24] made clear that U.S. students have the shortest school year among major countries. Table 1 shows a meta-analysis of estimates of the influence or effect of time on learning outcomes from statistically and experimentally controlled studies.[25] Of 376 estimates, 88 percent were positive—one of the most consistent findings in education research. The sizes of the effects are moderate

Table 1

Time Influences on Learning in Various Types of Research Studies

Area Researched	Number of Estimates	Percent Positive	Correlation Mean (N)	Effect Mean (N)
Studies in which instructional time was extended	162	83%	.27 (34)	.40 (57)
Earlier start in school or extra preschool	49	73	.08 (1)	.27 (32)
Lengthening the school day or week	26	88	.40 (7)	.96 (7)
Lengthening the school year	11	91	.22 (5)	--- (0)
Learning extended by homework/study	43	88	.23 (19)	.41 (18)
Extracurricular participation	33	85	.46 (2)	--- (0)
Studies of how school time was used	103	96%	.43 (50)	.49 (18)
Program length or long-term study	42	93	.57 (21)	.69 (5)
Attendance rate	6	100	.48 (4)	.32 (1)
Efficient time use	55	93	.31 (25)	.42 (12)
Theoretically-Driven Studies	111	90%	.35 (53)	1.10 (6)
Less time needed to learn a topic	18	89	.70 (6)	--- (0)
Studies of time on task	79	89	.26 (37)	1.10 (3)
Matching time spent to time needed	14	100	.47 (10)	1.10 (3)
All above studies	376	88%	.37 (137)	.47 (81)

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over a week or a semester; so, time is hardly a short-term panacea. Over many years, however, student engagement in study and practice time yields huge benefits, as we know from Asian schools (see Stevenson's chapter in this volume) and from studies of world-class performers in many fields who require well organized and substantial hours per week to attain high performance levels.[26]

Supplementing school time is homework. Meta-analysis showed moderate effects of merely assigning homework, but grades and teacher comments tripled homework's effects. A recent economic analysis of a large national sample estimated that an extra half-hour of nightly homework between grades 7 and 11 boosts math achievement by almost two grade equivalents in achievement.[27] On their own or with the help of school staff, moreover, parents can employ children's time before and during the school years to prepare them for serious academic work. They can foster academically stimulating activities such as museum going and leisure reading, and they can engage themselves in their children's schools.

Quality Instruction

Hundreds of instructional methods studies have been carried out, and thousands of achievement comparisons of classroom groups have been made. Many studies have employed random assignment of alternative methods to experimental and control groups as in agricultural and medical research. Their results have been compiled and compared to discover which work best. Since they work well and can be widely employed,[28] several instructional methods and principles deserve mention.

The most prevalent form of teaching, "direct instruction," can be traced to the turn of the century; it is what citizens and parents expect to see in classrooms. It is most effective when it exhibits key features and follows systematic steps: 1) daily review, homework check, and, if necessary, re-teaching; 2) rapid presentation of new content and skills in small steps; 3) guided

student practice with close teacher monitoring; 4) corrective feedback and instructional reinforcement; 5) independent practice in seatwork and homework with a high, more than 90 percent, success rate; and 6) weekly and monthly assessments and reviews. The traits of effective teachers employing direct instruction include clarity, task orientation, enthusiasm, and flexibility. Effective direct teachers also clearly organize their presentations and may occasionally use student ideas.

Other methods of teaching also work well and have distinctive features that may be contrasted with direct instruction, which, if aimed at the average student, may be too advanced for slower students and too repetitive for the quick. Consequently, "adaptive instruction" has been employed to make instruction more suitable to individual or groups of children. One traditional form, of course, is tutoring one or a few students thereby tailoring parts of lessons to precisely what they require and closely monitoring their progress.

Another form is "mastery learning," which, for subject matter to be learned in a sequence, requires frequent tests to guarantee the student has mastered one unit before going on to the next. Because of its emphasis on outcomes and careful monitoring of progress, mastery learning can save learners' time. It allows for remediation and as much as 500 percent more time for students who need it. It allows faster learners to skip material they already know. In these ways, it is superior to direct teaching in suiting instruction to small groups and individuals rather than to the average class member.

Computer-assisted instruction (CAI) often incorporates mastery principles. Programs require careful analysis of the subject matter and common learner errors that can be quickly diagnosed and corrected. One advantage of CAI is that can be used anytime anywhere. Since courseware does not require the continuous presence of teachers, it could be used at home as a

supplement or even a substitute for whole-class instruction. Although development costs are high, hardware costs are declining and programs are growing in scope and efficacy.

Computer and mastery programs require special planning, materials, and procedures. If, because of the National Educational Goals, U.S. subject matter becomes more uniform, both mastery learning and computer-assisted instruction are likely to become more prevalent because the development costs can be spread over many schools. (For that matter, mass instruction could be provided at home or wherever convenient by television and other forms of "distance education" as it is in many parts of the world with low population density. Done well, such programs have proven highly cost-effective.)

Direct instruction, mastery learning, and computer-assisted instruction are "top-down" from the teacher's or textbook plan. From these, students may or may not pick up independent or team learning skills. Several methods such as tutoring, "cooperative learning," and "reciprocal teaching" promote these as well as subject matter competence. By teaching one another, for example, students can learn independent research and presentation skills. They may learn how to give and receive criticism, and how to work with others as is called for in adult life. To learn something well, it is often good to teach it because such teaching requires organizing one's thoughts logically and anticipating misunderstandings and questions.

No single one of these methods is advisable all day; some variety is undoubtedly necessary to maintain teachers' and students' motivation. Other effective methods of instruction, moreover, could be described. Many such methods that work well, however, are either unchosen or poorly carried out. They are hardly panaceas, but, if well carried out, they make for moderate progress. Combined with more hours of school time and homework, they could raise U.S. achievement levels substantially.

Organization of Work and Instruction

Figure 3 illustrates the parallelism of effective instruction with principles of personal and work organization—division of labor, quality management, and market-based decentralization.[29] The first panel illustrates Adam Smith's insight about the efficiency of specialized labor: Each worker or work unit, if concentrated on a single task, can be far more efficient in contributing to total value of a product or service; the early production lines of the Ford Motor Company may come to mind. Psychologists later theoretically justified work specialization by showing people's limited capacity to absorb and to consider more than a few chunks of information at a time.[30]

Similarly, independently working professionals and others who group repetitive or similar tasks pay the time price of only one set up; working on unlike tasks places burdens on memory that requires refreshing or even reinvention. Excellent performance in many fields requires many hours of concentrated effort on limited tasks as in the case of coronary bypass surgeons who try to confine their attention to the most difficult part of operations for maximum amounts of time.

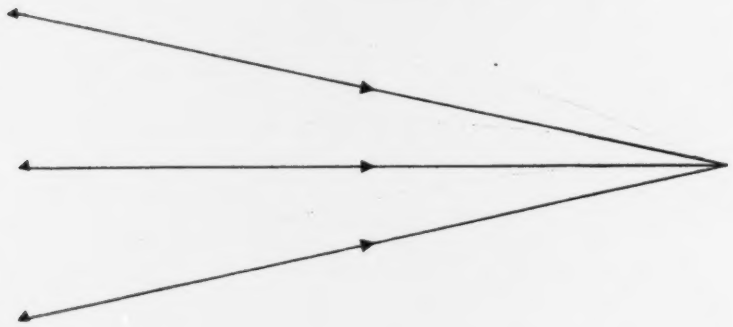
As work in organizations increases in scale and specialization, the executive cannot direct, monitor, and provide useful comments for all workers. General Motors acquired or created production units such as Buick and Chevrolet and service units such as finance and advertising, each with its own executive (second part of Figure 3). Coordination of efforts and specialization could further increase. Production units' profits (the difference between sales and costs for each unit) could influence board directors' decisions about bonuses, investment, and expansion.

Still, such organization increases complexity and lengthens the chain of command to as many as a dozen levels of administration between chief executive officers and workers which increases costs, decision making time, possibilities of confusion, and people serving multiple masters. The service units' contributions to added value, moreover, could not be easily measured.

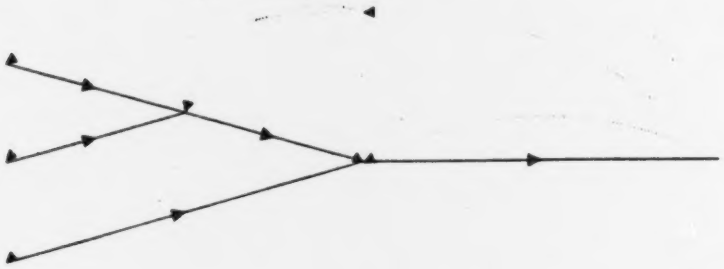
Figure 3

Evolution of Work Organization

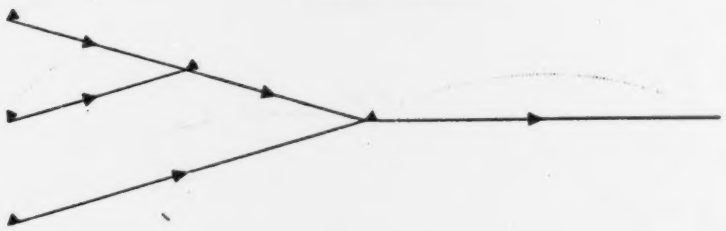
1. Division of Labor



2. Quality Control



3. Decentralization



Work Flows to the Right, Feedback to the Left

Stung by foreign competition, progressive industries are increasingly adopting a form of work organization first widely put into place by cost- and quality-conscious Japanese firms. It assigns substantial managerial responsibilities to teams of workers that treat other units of the firm as their suppliers and customers (third part of Figure 3). If their internal suppliers of semi-finished goods or services do not meet their standards including "just-in-time" delivery, they can reject them and contract with external individuals and firms. Similarly, manager-workers risk losing their own internal and external customers if they disappoint them.

Worker-managers are paid in proportion to the value they add, that is, the increase in the value of the outputs over input and production costs. Since it is in their interest to raise quality and cut costs, worker-managers can be given considerable voice in purchasing and in the hiring of new workers for their units. In tying rewards to results, this competitive arrangement can release the entrepreneurial potential of efficient individuals and work groups. It can also eliminate uncompetitive groups that impair quality, consumer appeal, and prosperity.

Such radical decentralization to work teams makes for greater competitiveness in internal and external markets. Since it avoids long chains of command, it allows for quick feedback and decision making, especially important at a time when speeds of innovation and delivery are crucial aspects of consumer appeal. The money formerly flowing to middle managers can be used to improve quality and contribute to profits and expansion. Such work calls for people who are competent not only in production but in executive skills of planning, contracting, monitoring, teamwork, and satisfying internal and external customers. For the well prepared, such work may be challenging, satisfying, and remunerative.

To put such a system into place requires more than a new management organization and competent employees. It requires giving them a kind of ownership stake in the success of their units. If their units prosper, they prosper, and the firm as a whole, its stockholders, and the nation

24 BEST COPY AVAILABLE

prosper. Since such worker-managers own much of the firm's increasingly valuable human and social capital and directly control the means of production, they constitute the largest category of the firm's ownership. As explained in a subsequent section, true ownership requires, if not private property rights for employees in this broad sense, then employee stakes in their unit's success.

Educators have an opportunity to prepare students for such work and to use such methods themselves. The effective instructional methods described in the previous section embed some of these principles. Computer-assisted instruction and mastery learning, for example, include quality standards. Tutoring, cooperative learning and reciprocal teaching delegate some planning and monitoring authority to students as workers. The challenge is to employ such methods more widely. The degree to which this can be accomplished depends on standards in curriculum and assessment as discussed in the next several sections. It would also require a precise system of achievement measurement to measure the value added by each work unit, that is, a teacher, team, or school staff.

Employ Uniform Standards

In *Horace's Compromise*, Theodore Sizer describes the common pattern of a teacher who gains an orderly and easygoing relation with his students by telling them the absurdly easy questions he will ask on a test. He gains the admiration of his principal even though his and his students' efforts are at a pathetic minimum.[11] Since solitary teachers can hardly raise standards on their own, educational policy makers (legislators and state and local school board members) need to consider how to increase the uniformity, rigor, focus, and coherence of subject matter.

Lest there be doubt about the lack of standards, consider what students think for they are schools' most direct and immediate customers. A Public Agenda survey of 1,000 randomly sampled high school students showed that three-fourths said stiffer graduation requirements and

required exit examinations would make students pay more attention to their studies.[12] Three-fourths also said students should not graduate who have not mastered English, and a similar percentage said students should be promoted to the next grade only if they master the material. Almost two-thirds reported they could do much better in school if they tried. Nearly 80 percent said students would learn more if schools made sure they were on time and did their homework. More than 70 percent said schools should require after-school classes for those earning D's and F's.

The U.S., of course, has a decentralized school system and teachers often select, according to their preferences or district policy, a small fraction of material from voluminous textbooks. Consequently, what students know and can do at the end of the academic year in any state is highly heterogeneous. As a new school year begins, American teachers bore bright students by reviewing and presenting prerequisite material to bring the least able students up to par before proceeding with new content. Especially in need are about one-fifth of the students, most of all, students from low-income families who move from other schools, districts and states.

Countries with national systems of education can prescribe uniform subject matter at each grade level and thereby avoid this inefficiency. Since they can assume students have mastered prerequisite material, teachers in these countries can present new subject matter immediately after perhaps a quick review of previous work. By these timesavings, students can forge ahead to subject matter that is more rigorous. Curricular uniformity has other advantages: Textbooks can be one-fifth the size of American ones currently designed to cover the diverse subject matter specifications of various states. Computer-assisted instruction, examinations, and other curricular materials can be more sharply focused on what students are to learn. Teachers can share a common focus on the selected subject matter and how best to teach it. Universities and employers can count on what students have been taught.

A uniform national system can not only be more rigorous and focused, but more coherent. Teachers of one subject can reinforce learning in other subjects. Mathematics teachers can illustrate their lessons by ideas being taught in physics. Language teachers can refer to what students learned three years earlier in history classes. Teachers and students may more easily converse because they have a common basis of knowledge and skills.

The principle may apply to states and to the nation as a whole. We undoubtedly need to enlarge core knowledge of American culture, geography, history, and literature to remain a cohesive nation. Students who remain culturally illiterate or ignorant of our national language and heritage may be unable to participate in economic and civic life."

Still, a uniform national curriculum, assessment, and standards imposed by the federal government would be controversial to say the least. Federal programs have long exhibited a pattern of inefficiency and failure. Even if a uniform federal system would yield some efficiency in theory, it would violate principles of states' rights and local control. Many educators, taxpayers, and public officials rightly fear giving power to special interests and federal bureaucracy out of touch with mainstream values. The excessive influence of teacher unions on politicians justifies such fear.

Thus, it would seem best for state departments of education, private groups such as testing agencies and subject matter groups to establish competing standards from which public and private schools could choose. These would be analogous to private industrial and professional standards that have successfully evolved and promoted commerce throughout the world. It can be expected that a few standards groups—the analogs of Apple, Microsoft, and Sun—would dominate and compete with one another for customers. The market, however, would leave room for diverse preferences.

Allow for Student Differences

Most children can learn, but they cannot learn at the same rate or to the same level. Students vary enormously in their talents and in the circumstances outside school that comprise about 87 percent of their waking hours in the first 18 years of life. Some students, generally those from high-income homes, begin school already knowing how to read. They learn at a faster rate, enjoy schooling, and pursue it longer. Less well prepared students, more often of lower socioeconomic status, encounter frustration, fall behind, and withdraw. (Despite contrary advocacy, secondary and higher education is regressive or inegalitarian in that children from poor families drop out much more frequently—a reason that egalitarian social democrats in Sweden have proposed fixed-value lifetime vouchers that could be sold at the age of maturity or used for adult sabbaticals.)

Early childhood programs such as Headstart have rarely had short-term success, and the occasional early gains evaporate within three years. The Perry Pre-School Project, often cited as the factual basis of Headstart, appeared to raise graduation rates, lower rates of placement in special education and decrease delinquency. These apparent effects, though, were small, disputed, and borderline in significance. The evaluation was conducted by project staff who may have had an interest in a financial interest in continuation and expansion of the project. Ten other such projects studied by the Consortium on Longitudinal Studies showed no such long-term effects.[14]

Many studies of the U.S. Department of Education's Chapter 1 compensatory program for low-income school children, on which more than $50 billion has been spent, rarely shows significant differences between program and comparable control students. In view of the long history of spending and failure, educators and others should be cautious about promising to compensate for family and neighborhood differences in socioeconomic status and related factors.

Similarly, policy makers should be more cautious about the testimony of program advocates, especially those that evaluate their own accomplishments.

Matthew Effects

What can be expected are "Matthew effects," so called because the academic rich get richer as they go through school. Ability differences within grades and years become more obvious to teachers, students, and observers. Since prior knowledge and reading skill are so important in academic learning, individual differences among students are apparent not only in mathematics and science but in such verbal subjects as English, civics, history, and geography. Such heterogeneity pressures teachers to set low standards or to track students.

Harold Stevenson's careful observational studies[9] further illuminate the U.S. achievement problem. They show that the abilities of beginning U.S. students equaled those of Japan and Taiwan. With each subsequent year of school, however, U.S. students fell further behind; by fifth-grade, the worst Asian class exceeded the best U.S. class. The steady progress of Asian students appeared attributable to a fast, unrepetitive curriculum, parental support, encouragement at home, and cultural beliefs in hard work rather than luck or talent as a chief determinant of success in mathematics. The challenge is to create schools in the U.S. that can at least partially recreate these kinds of incentives, attitudes, and accomplishments.

Grouping

Despite many studies of programs that failed to compensate educationally for the family inequalities, some reformers still promise equality of learning results. Even equality of opportunity, however, may be unrealistic. Having students three or four grade levels apart in achievement makes whole-group teaching inefficient. Teachers, for example, who reasonably aim for students in the middle teach the quick what they already know and the slow what they are yet incapable of learning.

A compromise made in many countries is to provide six years of primary school, three years of lower secondary, and three years of upper secondary school. As in a short foot race, the six years of primary school can be fairly uniform before growing differences among students become obvious; special programs, extra study, and summer school may help slower students keep up. By the end of the sixth year of primary school, however, students are likely to be heterogeneous in what they know and can do.

Therefore, lower and upper secondary schools can be differentiated with respect to academic rigor, interests, and specialization. Examinations and counseling can be employed to screen students into programs designed for students who are relatively homogeneous with respect to achievement and interest. Such schools can custom tailor their programs to their students' abilities and preferences.

Market-based management, however, might help us to do even better with respect to effective, efficient, and more egalitarian learning. It would require not only the management system described above but also a rigorous system of external examinations that would provide the measure of value added for rewarding results.

External Examinations

In Japan, students take competitive achievement examinations that filter them into schools of various gradations of rigor thereby enabling hard working children from poor families to attend more rigorous schools. In traditional European education, students are funneled into vocational, technical, and, for the university-bound, academic schools depending on externally set achievement-test standards.[36] In both Japan and Europe, examinations serve as inducements for students to work hard at their studies—the chief ingredient in learning. They are a means also of maintaining quality control over lower schools and a way of homogenizing abilities in higher education to make it more efficient.

In the U.S., students, even before school, are ability segregated according to residence since there are large differences in socioeconomic status among parts of cities and suburbs. Nearly all American public secondary schools, moreover, track students into courses and programs of various levels of difficulty. Otherwise, teachers would encounter the problems of direct instruction on an even larger scale.

Such differences among students must be frankly considered for several reasons. Many American students are "socially promoted" from grade to grade and eventually graduated for the "seat time" of attending classes. It is therefore rational for them to coast through easy courses especially since employers and most colleges do not review high school transcripts of grades and courses taken. Consequently, those who work immediately upon graduation are less well prepared than they should be, and they lack disciplined work habits. Since they are likely to bounce from one job to another, employers may be unwilling to hire them. Those that pursue a postsecondary education start with remedial work they should have mastered in high school, which costs students and society time and money.

If explicit standards for differentiated diplomas were adopted such as Basic, Proficient, and Advanced (similar to the National Assessment Governing Board standards), it would enable employers to base starting pay upon them and provide greater incentives to learn. Colleges might provide tuition allowances for superior high school performance. Mastery of special areas such as foreign languages, mathematics, and computer skills might be similarly employed. U.S. precedents include the Advanced Placement Examinations of the College Entrance Examination Board and the New York Regents' Examination—both of which deserve expansion and more powerful incentives."

Hold Educators Accountable

Since citizens pay for public schools, they should know how well they are doing. So also should parents, educators, legislators, and state and local school boards. To do so, they will need to compare the achievement scores of schools with one another and to standards of performance. James Coleman argued that if standards were externally set and measured, as they are in other countries, students could not pressure teachers to lower them. Teachers could then concentrate on helping their students meet the standards, as do coaches in competitive sports.[18]

In addition, as Coleman emphasized, student heterogeneity needs to be taken into account if there are to be fair standards and accountability. Therefore, student progress or the value added to learning by the teacher or school during the most recent year or other term should be the chief criterion. (Such value-added analysis is illustrated in preceding sections of this paper.)

Referring again to Figure 2, the value added by a unit at each step is the basis of accountability. This requires a measure at the end of each step so that the gains made by a student or group of students can be measured. Such value-added gains largely eliminate socioeconomic and other extraneous differences and provide a fairer basis for evaluating progress.[19] As suggested in the third organizational form, a single unit—teacher, team, or school—is the unambiguous locus of accountability.

As depicted in the second part of Figure 2, the present cumbersome system of administering public schools makes for conflicting and ambiguous reporting relations. Complex regulations at the federal, state, local, and school levels not only slow decision making but remove the possibility of such clear accountability. Present providers would undoubtedly object to such a system, but it might be in their long-term best interests as a profession. It seems likely to increase their effectiveness and efficiency, and could be used to reward results.

Incorporate Appropriate Incentives

The administration of U.S. education by federal, state, and local government allows too many cooks to spoil the school broth, high administrative costs, long chains of reporting, and ambiguous accountability. School boards and educators have many masters—none of which can be well served. Least well served but most important are their customers, namely, taxpayers who pay the bills, and clients of their services, students, parents, and employers. The unprecedented scope and complexity of U.S. school administration allow for much abuse.

In the language of organization theory,[40] "coordination costs" among departments and administrative levels divert money, time, and attention away from avowed purposes. "Information problems" prevent governing boards from getting full information on operations and results. Bureaucracies favor standard operating procedures over more productive and client-satisfying innovations.

"Agency problems" allow staff to work in their own self-interest. Presumably, they should instead be trying to suit board directives, consumer tastes, and client preferences. "Free riders" reap benefits of staff membership while evading costs of full effort. "Rent seekers" try to impose costs for unneeded or unperformed services thereby reducing value in relation to consumer or public costs.

These are old stories in organizations and they apply fully to school governance and operations. The cure lies in rearranging incentives to benefit intended recipients of education services. Under the leadership of Eric Hanushek, thirteen economists recently discussed a variety of programs that encourage attainment of results. These include performance contracting, charter schools, merit pay for teachers, improved teacher selection and renewal procedures, merit schools (in which the staff as a whole is rewarded for raising achievement), and school-based management.[41]

As Hanushek and his associates point out, incorporating increased incentives tied to results has theoretical appeal and has worked well in many industries as well as in the public sector.[42] The system of value-added feedback, accountability, measurement, and incentives described here provides a framework for understanding these innovations. The implementation of such a system, however, would leave the organizational particularities to governing boards and worker managers.

Still, resistance to change has prevented rigorous field tests of such programs of increased incentives in public school—all the more reason that states should create conditions for experimentation, conduct careful evaluations of their results, and expand those programs that work best. Since the history of educational reform suggests that such efforts, however, will be feeble and unevaluated more radical reforms seem in order.

Abolish or Voucherize Federal Education Programs

Many U.S. education problems can be traced to costly, complex, and voluminous federal and state regulations and programs brought about by special interest groups. In 1991, for example, 70 "categorical programs" for children and families were each funded at a cost of $100 million or more per year.[43] The education programs were to serve one or another category of children such as the poor, migrant, low-achieving, "limited-English proficient," "language disabled," "behaviorally disordered," and "emotionally disturbed." Such programs were to reduce the achievement gaps between students so-categorized and other students, but they had the effect of injuriously labeling and segregating them from others.

The biggest and best example is compensatory education (also known as Title I and Chapter 1), which currently costs about $7.2 billion per year. With 1965 origins in President Lyndon Johnson's "War on Poverty," its backers represented "perhaps the widest constellation of interest groups ever assembled on a domestic issue." These included "Big Six" lobbying groups

such as the National Educational Association and the American Association of School Administrators. "

To compensate for economic inequalities, Chapter 1 was to eliminate the poverty gap in achievement by redistributing taxpayer monies to schools with especially high concentrations of low-achieving children in poverty. The poorly targeted funds, in fact, go to 93 percent of all U.S. school districts; the program serves many non-poor students though leaving many poor students unserved." Making poor achievement a criterion for participation and a barrier to exiting students creates a perverse incentive: The more low achievers so classified, the federal largesse for the school and district.

To target funds on poor, low-achieving children requires their physical separation or "pull out" from regular classes for part or all of the school day (or, less often, simultaneous and mutually distracting lessons for poor and non-poor students in the same classroom). Employed in 82 percent of compensatory-funded districts, pull out programs have many inherent problems: Separated children gain time in remedial reading and mathematics but at the expense of non-remedial work in these subjects as well in other subjects such as history, music, and science. Their less qualified teachers or more often poorly trained aides tend to employ repetitive drilling rather than stimulating lessons; they remain ill-informed about the subject matter and lessons in the regular class—thus trivializing and fragmenting subject matter. The children, some of which belong to other federal categories, waste time going from room to room and being shuffled from one teacher or aide to another.

As might be expected, repeated large-scale evaluations of the program for the past quarter century have been negative. Notwithstanding the extra funds, services, and thirty years of promises and reforms, students in the program still achieve about as well (or poorly) as

comparable students not in the program. The gap between poor and non-poor children remains unaffected.[46]

The other huge federally initiated categorical program, special education, is similarly ill founded and ineffective for many of the same reasons. In 1990-91, 4.8 million students were enrolled, most in new federal categories of "neurological deficit," "language impairment," "mild retardation," "emotional disturbance," and "behavioral disorder" (rather than the long-established, scientifically creditable categories of blindness and deafness). In reviewing such new programs, the National Academy of Sciences concluded that children should not be placed in such special education programs unless they demonstrate a) scientifically reliable systems of student categorization and b) that so-categorized children actually benefit from the special programs. Federally sponsored special education programs meet neither criterion. Instead, they encourage spurious and insidious psycho-pathological stereotyping in which little learning is expected by teachers, parents, peers, and categorized students themselves.[47]

Federal "transitional bilingual education" is another sizable example. It requires children to be taught in their mother tongue until they learn English. This, of course, denies them the very thing they most need—practice in English, which brought mastery to the previous century of American immigrants. As in special education, once admitted, children often remain in bilingual programs indefinitely.[48] Program administrators must chose between children's success and losing their jobs.

Initiated and maintained by the federal government, compensatory, special, and bilingual programs created a segregated, "second system" in the U.S. that isolates poor and low-achieving students. Under Washingtonian "trickle-down theory," federal programs create many bureaucratic, professional, and semi-professional jobs. Though costing many billions of federal

and state dollars, they do little good and considerable harm to their nominal beneficiaries—American school children, particularly the most educationally needy.

The six or so percent the federal government contributes to elementary and secondary education costs may actually cause far larger harms. Aside from the segregation, stereotyping, and waste discussed above, it distracts administrative and professional attention, energy, and funds from education's end product—classroom learning. This is best seen in large cities where federal programs are most prevalent and test scores are lowest (much lower than poverty levels would predict). It has been estimated, for example, that, despite a 1996 deficit of $2.5 billion, New York City was spending only one-fifth of the public school budget from federal, state, and local sources on classroom instruction.[49]

Thirty years of failure, unfulfilled reform promises, and several hundred billion dollars calls for radical solutions. Abolishing the Secretary of Education's chair in the President's cabinet and reconstituting the U.S. Department of Education appear insufficient. Federal categorical programs are doing the harm. Ending them would serve the public interest and would be consistent with the traditional and constitutional role of states and local communities in setting educational policy. It would reduce the influence of perverse incentives and special interests. It would remove complex regulations, simplify administration, and yield shorter state and local feedback loops for accountability. It would terminate the behavior observed by Jane Hannaway: "The job of the categorical program manager is geared to keeping the funding agencies satisfied rather than managing the educational program."[50] The federal money saved could be better raised and spent by state and local agencies, which would further enhance local decision making. Short of this, unrestricted block grants of federal funds would allow states and local communities to evaluate plausible solutions of American schools' productivity problems.

Another alternative is voucherizing categorical programs by giving money directly to deserving families. Consider, for example, the $7.2 billion Chapter 1/Title I compensatory program for poor children. The most direct and efficient way to compensate for poor children's educational disadvantages is to give money—not to bureaucrats and professionals—but to poor families in the form of educational vouchers to purchase educational services from a variety of public schools and private providers. This would have an immediate "consumer sovereignty" effect of putting the customer rather than the producer in charge. It would provide incentives and rewards for success now missing from federal programs and public schools since providers would have to compete for students. The feedback loop between provider and customer would be in place. Under such a system, children would have the benefit of regular classes plus voucherized supplementary evening, Saturday, and summer programs that would not be tied to the usual inefficiency of public schools and special interests.

PRIVATIZING SCHOOLS

The largest and most fundamental problem is not categorical programs but the lack of competition among government schools, which, in the absence of incentives to improve, leads to producer rather than customer interests. Categorical programs and regulations are bureaucracy's vain attempt to assess consumer needs, prescribe solutions, and create accountability in the absence of market forces. Far better than this are citizens themselves. How can governments gainsay their preferences?

Various experiments in privatization and "contracting out" public services to private (not-for-profit and for-profit) firms suggest that they respond swiftly and accurately to citizens' desires.[11] An economist's version of "meta-analysis" (analysis of results of many studies) shows that, other things being equal, private organizations on average perform significantly better at lower costs, and that they are more satisfying to their staff and their customers. The studies

concern airlines, banks, bus service, debt collection, electric utilities, forestry, hospitals, housing, insurance sales and processing, railroads, refuse collection, savings and loans, slaughterhouses, water utilities, and weather forecasting.[12] In the U.S. and other countries, governments are even beginning to privatize prisons, police, fire protection, and public pensions.

Nations that rely on the private sector for goods and services also do better: The lower the share of low-, middle-, and high-income nations' public spending of gross domestic product, the greater the economic growth rate, social welfare, and citizen choice.[13] Compare Hong Kong and Taiwan with Mainland China, South and North Korea, Western and Eastern Europe. With respect to recent economic growth, compare the Asian Pacific countries with Africa, India, and Europe. Ample evidence shows that finance and operation of services are more efficiently controlled by direct citizen choice than by governments.

New Evidence for Free Market Advantages

Vast amounts of research and common experience suggest that markets and competition work well. Providers of public education, nonetheless, insist that education is an exception. They oppose experimental privatization trials but insist on strong evidence for efficacy before it is tried. In a country, nonetheless, with the highest or near highest costs and the worst (value-added) achievement gains, Americans have the right to ask where the burden of proof lies. Even so, recent evidence refutes the standard producer contentions.

First, enlarging private school choice may be best for public education since what public schools lack is competition; most are, in economic terms, local monopolies.[14] Recent research supports the value of local private competition in improving public schools. Rather than "creaming off" the best students, the presence of private schools and public schools of choice in geographical areas is associated with better performance of public school students.[15] Their

success is no doubt attributable to greater latitude of consumer choice and unleashed competitive force.

Studies in ten countries including three in the U.S. suggest that, other things being equal, private (including independent and sectarian) schools achieve more at lower costs.[56] Jane Hannaway suggests that responsiveness to consumer preferences is the key to their success.[57] (Government curtailment of their decision making, however, might negate private schools' superior performance.[58])

The one U.S. instance of a randomized experiment employing vouchers is Milwaukee. Applicant minority children to private schools were admitted at random since there were insufficient spaces to meet demand (even though the costs of the program were about half that of public schools, the state department of education created many uncertainties and difficulties, and various start-up difficulties ensued). After several years, the selected students did significantly better on standardized tests, sufficiently well that the usual national minority-majority achievement gap could be substantially cut.[59] Perhaps even more important and notwithstanding the startup difficulties parents were delighted with the private schools.[60]

Consumer Preferences

Surveys show that citizens increasingly favor choice in education including private schools. The 1992 Gallup poll showed that of those polled 70 percent supported vouchers. Eighty-five percent of African Americans and 84 percent of Hispanics supported vouchers.[61] Inner-city minorities particularly favor privatization since government schools available to them are most often dominated by federal categorical programs and regulations, which make them unresponsive to parents. In Milwaukee, for example, which has had most experience with privatization, 95 percent of African Americans favored private and public school choice, and 70 percent believed that students get a better education from independent and sectarian schools.[62]

Other recent and strong behavioral indications of private preference can be cited: The growth in privately funded vouchers for poor children has grown quietly but meteorically. Funded by individuals, philanthropies, and firms, their numbers in 17 cities have grown from 744 to 6,572 in four years—further evidence of consumer preference.[51]

Another indication of preference for private over public education is the parents of about 900,000 home-schooled children; they sacrifice their time and money for what they consider is a superior education for their children. Many of them fear the violence and lifestyles taught in public schools. (Though they are mostly amateur teachers, their children's average achievement on standardized tests exceeds 77 percent of regular school children.)

In addition, many parents voluntarily pay for private schools and special tutoring, even though the public schools are free of charge. Aside from the efficiency arguments made above, this alone is proof enough of the virtues of privatization. Citizens are the arbiters of quality in free societies. It is they—not government—that should make the choices that affect their children's lives.

Reconciling Choice and Standards

Even the most ardent free-market libertarians know that American schools are unlikely to be voucherized tomorrow. Powerful special interests—the teachers' unions and other education lobbying groups—adamantly oppose vouchers and strongly influence legislators. They have severely curtailed the number and nature of charter schools, by comparison, a modest and less threatening reform.

Therefore, education privatization will probably require further evidence. Aside from consumer preference, the best criteria are high standards on achievement tests in the standard school subjects. These may be employed in experiments to evaluate the many variations on choice that have been proposed. Once these experiments have been completed, there may be less

evidentiary need for tests, but it seems likely that policy makers and parents would continue to want to know about how well students meet achievement standards.

CONCLUSION

Privatization might better satisfy all but the special interests of public school providers and the defenders of the appalling status quo. Change might best start at the top. Vouchers for federal and state special needs programs, for example, would put money and authority directly in the hands of parents rather than in the current "trickle down" system from Washington and state houses through special interests and administrative hierarchies.

Voucherized federal programs would supplement rather than supplant special needs children's regular schooling and allow their parents to make their own program choices. Aside from ensuring safety and civil rights protections, regulations could be minimal. Program funds could be free of the rules that suffocate many public schools; funding could be more concentrated less on administrative overhead and more on increasing the amount and quality of educational services. Markets would compensate providers according to their capacity to attract and maintain student enrollments.

At the state and local levels, deregulation of public schools would allow them greater latitude to compete and to provide diversity reflecting consumer tastes. Allowing students to attend public schools outside their neighborhoods would encourage further competition, choice, and consumer sovereignty. However, the forces of convention and special interests described above may suffice to prevent the success of the current round of decentralizing reforms. Union opposition and excessive regulations already threaten the timid few charter schools in the U.S.

Some policy makers, moreover, may hesitate to increase choice. Some are beholden to special interests. Others do not want to relinquish power to regulate; they have reservations about parents' intellectual and moral capacity to choose schools for their children.

Still others policy makers would prefer a greater degree of accountability for results; they want to see schools work efficiently toward high standards. Legislatures and school boards could better achieve this if they evaluate results rather than micromanage operations. They could employ value-added learning measures to reward results. Educators could be compensated for the degree that they increase learning as indicated by external objective examinations.

More generally, though, school vouchers have the greatest likelihood of success. The evidence for private schools' superior achievement suggests enlarging their numbers with publicly subsidized vouchers. This would be worth doing if for no other reason than the better performance private schools elicit from nearby public schools. In a free society, however, consumer sovereignty and parental choice for their children should be dispositive arguments.

Endnotes

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2. See Stedman's and Stevenson's chapters in this volume. To be sure, high school students in middle class suburbs substantially outscore inner-city students, but they in turn are exceeded by the better students in Japan and northern Europe. See John Bishop, A Strategy for Achieving Excellence in Secondary Education: The Role of State Government. An unpublished paper presented at the *Council of Chief State School Officers Summer Conference*, 1991, pp. 1-2.

3. Grissmer, D. W., Kirby, S. N., Berends, M., & Williamson, S. (1994). *Student Achievement and the Changing American Family*. Santa Monica, CA: Rand Corporation. The February 22, 1997 issue of *The Economist* pointed out many positive features of American families and child rearing: Our children, for example, start school earlier than previously. When they finish school, young adults increasingly stay on with their families; and large majorities see eye-to-eye with their parents on the value of education, women's roles, religion, racial issues, and on how to dress. More and more Americans give kidneys to family members; a greater fraction of elderly live with their families than those in most north European countries, and increasingly greater percentages of mentally retarded Americans live with their families, pp. 27-28.

4. Hanushek E. A. (1996, December). *The Productivity Collapse in Schools*. Rochester, NY: W. Allen Wallis Institute of Political Economy, pp. 10-11.

5. Greenwald, Hedges, and Laine contend that more money makes a difference in achievement. They showed that excluding much evidence contrary to their contention leaves a remaining body of evidence that on average supports their view even though some remaining studies show negative effects of higher spending. Taking their selective evidence and analysis at face value suggests that raising school expenditures $500 (in 1993-94 dollars) or about ten percent for per-pupil expenditures, teacher education, experience, and salary, and teacher/pupil ratios yields estimated effects of between .04 and .22 standard deviations or an average of .15. Aside from selective evidential bias, Hanushek has raised persuasive objections to these estimates and their usefulness such as the lack of description of circumstances of when money makes a difference. In addition, my reservation is that even if these estimates were beyond question, they are tiny, that is, between one-fifth and one-third the size of the effects of effective teaching techniques, for example, assigning and providing feedback on homework. Thus, effective teaching techniques, established through rigorous experimental-control group studies as in agriculture and medicine yield far larger achievement effects than controversial estimates of expenditures based on passive production-function studies. See Rob Greenwald, R., Hedges, L. V., & Laine, R. D. (1996). The effect of school resources on student achievement, *Review of Educational Research 66*, 361-396; Hanushek, E. (1996) A more complete picture of school resource policies. *Review of Educational Research, 66*, 397-409; and Walberg, H. J. (1984). Improving the productivity of America's schools. *Educational Leadership, 41*, 19-27. For the latest compilation of inconsistent expenditure and further answers to criticisms, see Hanushek, E. (1997). Assessing the effects of school resources on student performance," *Educational Evaluation and Policy Analysis, 19* (2), 141-164.

6. Economists may think of efficiency or productivity as the ratio of monetary benefits to costs. These terms are employed differently here as generally referring to value-added learning in relation to costs and student time consumed.

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7. Organization for Economic Cooperation and Development (1995) *Education at a glance: OECD indicators*. Paris: OECD. Bishop, J. H. in "Incentives to Study and the Organization of Secondary Instruction" (in W. Becker, & W. Baumol [Eds.], *Assessing educational practice: The contribution of economics*) proposes deflators for school expenditures.

8. See, for example, Flynn, J. R. (1984). The mean IQ of Americans: Massive gains 1932-1978. *Psychological Bulletin, 95*, 29-51.

9. Organization for Economic Cooperation and Development. (1996). *Education at a Glance: OECD Indicators*. Paris, France: Author, pp. 212-213.

10. Hoxby, C. M. (1996). Is there an equity-efficiency trade-off in school finance? Tiebout and a theory of the local public goods producer. Cambridge, MA: Harvard University, National Bureau of Economic Research, Working Paper #5265.

11. Walberg, H. J., & Walberg, H. J., III. (1994, June/July). Losing local control: Is bigger better? *Educational Researcher*, 23-29.

12. Borland, M. V. & Howsen, R. M. (1996). Competition, expenditures and student performance in mathematics. *Public Choice, 87*, 395-400.

13. Hoxby, C. M. (1996). Does competition among public schools benefit students and taxpayers? Evidence from natural variation in school districting. Cambridge, MA: Harvard University, National Bureau of Economic Research, Working Paper #4979.

14. Armor, D. (1997). *Competition in education: A case study of interdistrict choice*. Boston: Pioneer Institute for Public Policy Research, 1997.

15. Antonuucci, M. (1997, March 11). How much do teachers really make? *Wall Street Journal*, pp. A22.

16. Hoxby, C. M. (1996, August). How Teachers' unions affect education production. *Quarterly Journal of Economics*, pp. 1-24; Peltzman, S. (1996). Political economy of public education: Non-college-bound students. *Journal of Law and Economics, 39*, 73-120.

17. Office of Management and Budget. (1997). *The 1997 budget of the United States Government, historical tables*, pp. 57-59.

18. See Walberg, 1996.

19. Wolf C. (1988). *Markets or governments: Choosing between imperfect alternatives* Cambridge, MA: MIT Press.

20. See Walberg and Walberg, 1994.

21. Strang, D. (1987). The administrative transformation of American education: School district consolidation, 1938-1980. *Administrative Science Quarterly, 43*, 352-66.

22. Cawelti, G. (Ed.). (1996). *Handbook on improving student achievement*. Alexandria, VA: Alliance for Curriculum Reform.

23. Many of these conclusions are based on "meta-analyses" or statistical summaries of a large groups of studies. Though such works may be more familiar as summaries of the efficacy of medical and surgical treatments, meta-analysis originated in education and psychology to summarize the results of many studies. The statistically summarized results are somewhat analogous to expressing the percentage of games won by a sports team or the average ratio of points won to those lost.

24. National Commission on Excellence in Education. (1983). *A nation at risk*. Washington, DC: U.S. Government Printing Office.

25. Walberg, H. J., Niemiec, R. P., & Fredrick, C. W. (1994). Productive curriculum time, *Peabody Journal of Education*, *69* (3), 86-100.

26. Walberg, H. J. (1984). Improving the productivity of America's schools. *Educational Leadership*, *41*, 19-27.

27. Betts, J. R. The role of homework in improving school quality. La Jolla, CA: Department of Economics, University of California, UCSD Discussion Paper, pp. 96-16.

28. See the chapter "Generic Strategies" in Cawelti, 1996.

29. The figure is adapted from Coleman, J. S. (1994, March), Achievement oriented school design, an unpublished paper presented at the *Social Organization of Schools* conference, University of Notre Dame. I am grateful to Prof. Coleman for discussion the principles represented in the diagram and to Joseph Bast for suggestions on adapting it to management principles.

30. Simon, H. A. (1981). *Sciences of the artificial*. Cambridge, MA: MIT Press.

31. Sizer, T. (1984). *Horace's compromise: The dilemma of the American high school*. Boston: Houghton Mifflin, p. 156.

32. Bradley, A. (1997, February 12). Survey reveals teens yearn for high standards, *Education Week*, pp. 1, 38-39.

33. See Hirsch, 1987; Ravitch & Finn, 1988.

34. Haskins, R. (1989). Beyond metaphor: The efficacy of early childhood education. *American Psychologist*, *44*, 274-282.

35. Stevenson, Lee, & Stigler. (1986).

36. Bishop, J. H. (1996). *The impact of curriculum-based external examinations on school priorities and student learning*. Ithaca, NY: Cornell University Center on the Educational Quality of the Workforce and Center for Advanced Human Resource Studies.

37. John Bishop cogently argues that a major problem is the lack of priority given to achievement in U.S. schools. Bishop, J. H. Incentives to study and the organization of secondary instruction. In W. Becker, & W. Baumol, (Eds.), *Assessing educational practice: The contribution of economics*.

38. See Coleman (1994).

39. Policy makers who value equality of results could differentially reward educators for gains among

low achievers.

40. Mancur Olson, M. (1971). *The logic of collective action*. Cambridge, MA: Harvard University Press; Buchanan, J. M. (1968). *The demand and supply of public goods*. Chicago: Rand-McNally.

41. Hanushek, E. A. (1994). *Making schools work: Improving performance and controlling costs*. Washington, DC: Brookings Institution, pp. 85-124.

42. *The Economist* (1996, November 30) points out several advantages of profit sharing: By giving workers a stake in the firm or unit, profit sharing can give them an incentive to work harder. It can strengthen employees' loyalty, reduce turnover, and lead to a more experienced and skilled work force. It can allow firms to employ more workers, less often fire them, and take greater risks since the wage bill declines in hard times when profits fall. (p. 80)

43. Reynolds, M. C. (1995). Funding. In M. C. Wang, & M. C. Reynolds (Eds.) *Handbook of special and remedial education*. Oxford: Elsevier.

44. Kirst, M., & Jung, R. (1980). The utility of a longitudinal approach in assessing implementation: A thirteen-year view of Title I, ESEA," *Educational Evaluation and Policy Analysis*, *2*, 17-35.

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46. Op. Cit., pp. 106-107.

47. See Reynolds, p. 347.

48. Rossell, C. H., & Ross, J. M. (1986). The social science evidence on bilingual education. *Journal of Law and Education*, *15*, 385-419.

49. Speakman, S., & Cooper, B. (1995). Bringing money to the classroom. In L. O. Picus, & J. L. Wattenbarger (Eds.), *Where does the money go?* Thousand Oaks, CA: Corwin Press, p. 111.

50. Hannaway, J. (1985). Administrative costs and administrative behavior associated with categorical programs" *Educational Evaluation and Policy Analysis*, *7*, 57-64

51. Profit is compensation for risk taking. Those hostile to profits do not seem to realize that beginning a firm requires hard work and capital often lost since the bulk of firms that begin fail within a year. Even large, dominant firms such as Pan American Airlines go under. Profits also reward risk taking, innovation, efficiency, and competition—exactly what public schools require.

52. Wolf, C. (1988). *Markets or governments: Choosing between imperfect alternatives*. Cambridge, MA: MIT, pp. 137-148.

53. See Wolf, 1988, previous note.

54. The forces of failure and convention described above may suffice to prevent the success of current round of reforms such as charter schools. Union opposition and excessive regulations already threaten the timid few charter schools.

55. Couch, J. F., Shughart, W. F., & Williams, A. L. (1993). Private school enrollment and public school performance. *Public Choice*, *76*, 301-312. See also Borland & Howsen, 1996.

56. Jimenez, E., Lockheed, M. E., & Paqueo, V. (1996). The relative efficiency of private and public schools in developing countries. *World Bank Research Observer*, *6* (2), 205-218; Toma, E. F. (1996, April). Public funding and private schooling across countries. *Journal of Law and Economics*, 121-148; Gamines, E., & Lockheed, M. (1991). Public versus public education: An international perspective. *International Journal of Educational Research*, *15* (5), 357-397.

57. Hannaway, J. (1991). The organization and management of public and Catholic schools: Looking inside the "black box". *International Journal of Educational Research*, *15* (5), 463-481.

58. See Toma, previous note, p. 121.

59. Peterson, P. E., Greene, J. P., & Noyes, C. (1996, Fall). School choice in Milwaukee. *The Public Interest*, pp. 71-80.

60. Carried out independently, this randomized study was contradicted by a previous study (sponsored by the state department of education) that relied on statistical adjustments in analyzing achievement rather than an experimental design, which is all the more reason for far wider and fairer implementation and evaluation.

61. Moe, T. M. (1995). *Private Vouchers*. Stanford, CA: Hoover Institution Press, 1995.

62. Shokraii, N. (1996, December). Free at last: Black America signs up for school choice. *Policy Review*, pp. 20-26.

63. See Moe, p.14.

64. See Murphy, B. (1996, December). *American Psychological Association Monitor*, p. 1.

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The Laboratory for Student Success (LSS) is one of ten regional educational laboratories in the nation funded by the U.S. Department of Education to revitalize and reform educational practice in the service of children and youth.

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